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ABSTRACT

Self-evaluation requires teachers to have an ability to systematically reflect on their own pedagogical activities; action research supports and helps teachers in this process. This article explores the use of action research by teachers to improve both their own expertise and their educational environment. The article begins with a discussion of teacher education in Finland, describing the transition from a "training paradigm" in which teachers are seen as users rather than producers of knowledge, to a paradigm that emphasizes reflection by teachers and an inquiring culture in education. It next describes the development of the idea of teachers as researchers during the past 40 years, including the theories of Lawrence Stenhouse, the need to emancipate teachers' "voices" from school authorities, the expanding collaboration between teachers and researchers, and the recent growth in Finland in its role in teacher education. Following is a description of characteristics of action research, such as its four elements (action, reflection, retrospection and prospection); four categories of teacher research (journals, oral inquiries, classroom studies, essays); and Altrichter's (1993) six principles of action research. Last, the significance of action research for professional development, as a strategy of change in educational institutions, and as a production of new knowledge in education and learning, is explored. Contains 32 references. (EV)

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THE TEACHER AS A RESEARCHER

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Introduction

We live in a time where the only obvious thing is continuous change. In order to survive among the unexpected changes in our everyday lives, we all must be capable of an inner process, change and development that means lifelong learning. The challenges faced by the teachers in Finnish schools and in educational practice are partly similar to the challenges met in the other parts of the world and partly different. Pluralism and new value conflicts, an increase of international contacts and a simultaneous emergence of divergence and inequality are among the global developmental prospects. In addition, the increase in the importance of the media and the decentralisation of power also require changes in educational practices and new approaches both in research and in teacher education. (Educational studies and teacher education towards the future 1994, 46-47)

My starting point is that in order to be able to meet the challenges of society and to promote the change in day-care centres and schools the teachers need to change themselves. An educator who is committed to his/her work is an autonomous professional who adopts the same kind of attitude towards his/her work as a researcher. The educators are required to have an ethical attitude, i.e. a commitment to improve the lives of all the children, the skills of a reflective practitioner, i.e. self-criticism, which means continuous self-assessment of their own educational methods. One indicator of the teacher's new expertise is the responsibility they take in supervising the pupils' learning and in maintaining their own command of the subject they teach and their pedagogical skills. The autonomy in teaching requires that the teacher has the power to decide on his/her work in a school or a day-care centre and the ability to participate in collegial partnership in order to improve his/her own action. (Teacher Quality Report 1993; Fullan 1993; Kohonen & Niemi 1995)

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From the Training Paradigm towards a Reflective Practice in Finnish Teacher Education

The demand for changes in the school means great challenges for teacher education, which has to be renewed simultaneously with the school. However, the problems of teacher education are very much alike in the different parts of the world and the change is slow. In an international comparison, Finnish teacher education is of high quality, because all of our teachers from day-care centres to upper secondary schools are educated in universities. However, teacher education is seen as too conservative even in Finland and the changes in the schools are proceeding too slowly. People have doubts that the integration of research into studies has not always led to the hoped-for results. The criticism that has been presented is understandable, because the new university status in Finland was accompanied by an emphasis on psychologically and behavioristically oriented scientific bases of teacher education. This "training paradigm", where the teachers are seen as users rather than producers of knowledge, takes the teacher to be an object for research done by others and a user of results, in other words as an implementor of ready-made, highly developed programmes. In Finnish educational research, this paradigm has meant that statistical approaches and studies based on different inquiries gained a foothold in research. The students were instructed to measure the connections between individual variables separated from real school life. It is only gradually that the traditional behavioural paradigm has been replaced first by paradigm emphasizing personal development and then by a paradigm of reflective practice (Kansanen 1990). At the same time, an interest in action research has arisen and there has been a transition to qualitative approaches in the research done by students.

The education of teachers who are oriented towards the future and who develop their own work is not based on the training tradition but on a paradigm that emphasizes reflection by the teachers and an enquiring culture in education. Bullough and Gitlin (1989) use the concept "educative community", which is based on an ethic of caring and on the establishment of dialogical relations. A community of this kind strives for change and is committed to it. The knowledge of all the participants is equally valuable for this aspiration. Dialogue improves and broadens mutual understanding. Dialogue is considered to be promising in the development of teacher education towards increasing democracy (Fernandez-Balboa & Marshall 1994). In that case, dialogue means active conversation, which allows the opinions of all the participants to be heard and developed. Real dialogue is based on the understanding of one's own restrictions and the realisation that everyone needs other people. If there is an aspiration in teacher education to advance reflection based on dialogue, reason and the ethic of caring, the consideration of technical issues and values should not be separated in

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research. In addition, students should have time for reflection and for challenging activities that are shared and done together.

In Finnish teacher education, there has been a definite change towards the above paradigm. Heikkilä (1995), for instance, strongly emphasizes the student's self-steering, responsibility and constructive learning as the basis of teacher education. The same trend of development is clearly pointed out in the report of the evaluation group in the educational sciences (Educational studies and teacher education towards the future 1994). This is also the case in several other studies made by different units concerning their activities and views (Huttunen & Karkama 1995, Kohonen 1994, Korpinen 1995, Syrjälä 1994). In the most recent Finnish literature on teacher education, the emphasis has hence been on the teacher as a researcher of his/her own work and action research has been seen as an essential part of the teacher's professional skills. But what do we actually mean with these concepts and what is the significance of the research done by teachers?

"The teacher as a researcher" movement and action research in different countries

The idea of the teacher as a researcher has kept changing during the past forty years. The view on the teacher researching his/her own work has been sometimes rejected and sometimes accepted. In the global debate, there has been discussion over whether teachers can act as researchers or why we need researching teachers. Alternative names and new practices have been developed for the concept of "the teacher as a researcher". The terms "research", "action", "collaborative", "critical" and "inquiry" have been connected with each other and with the concept "teacher" in many different ways (Cochran-Smith & Lytle 1993, xiii).

The idea of the teacher as a researcher is mostly associated with the work of the English curriculum theorist Lawrence Stenhouse, who, together with his colleagues, developed democratic research in the university of East Anglia in the 1970's and inspired teachers to actively participate in all the phases of the research process concerning their work. The roots of action research date back to progressive pedagogy, especially Dewey's thinking and speeches. Action research had a notable status in the United States in the 1950's, and it began to gain new strength there in the early 1970's. Simultaneously, action research started to spread to many different countries, and it developed with different emphases, especially in Australia, Germany and Scandinavia. Today, the action research is a world-wide movement, which has a journal of its own and annual conferences.

The radical idea of Stenhouse was to help teachers to develop as self-reflective researchers and practitioners who could examine their own practice critically and systematically (Oja & Smulyan 1989, 8). He criticised the

prevailing object model for the development of curriculum, which minimised the teacher's role as a developer, and emphasized the process model, which is based on the teachers' self-evaluation of what they consider important in the curriculum. Self-evaluation requires the teachers to have an ability to systematically reflect their own pedagogical activities. Action research supports and helps teachers in making wise solutions in the development of the curriculum. Stenhouse believed that reasoning on their own activities helps teachers to clarify and change the theories that guide their work and to make implicit theories become explicit. At the same time, teachers need to check whether their practice reflects the values they imagine and whether they understand what values the practice actually reflects. According to Stenhouse, the curriculum will not develop without the teachers' development. While developing the curricular plan as action research, the teachers develop themselves professionally at the same time.

John Elliott (1994) continued Stenhouse's work and supervised teachers who collaborated on developing inquiring learning in their classes. Today, he is heading a multinational development project on environmental education. The project is based on the action research done by teachers in schools. The results obtained over ten years show that action research has been an effective method of making changes in schools. The significance of the systematic reflection done by teachers turned out to be crucial. It was essential that favourable environments were created for the implementation of action research during the project. The starting point was the jointly developed frame of reference and supporting measures available to the participants.

In the German-speaking area, action research has developed rather independently and has had connections with the ideological, cultural and political contexts of the area. The development of action research has been unstable there, because, after the notable increase right after World War II, action research nearly disappeared from the practice. (Altrichter & Gstettner 1993). During the first wave, the nature of action research was markedly political and it was associated with the post-war protest movement of students. Similar forms of participatory action research, which have connections to the pedagogy of Freire, are gaining strength especially in Latin America (Torres 1992). In the German-speaking area, action research is also strengthening anew, being now more strongly connected to the Anglo-American tradition. More clearly than before, action research studies focus on the workers' and academic researchers' collaboration, which emphasizes the reflection done by the participants (Kelchtermans, Vandenberghe & Schratz 1994).

During the past few years, action research has been developed on the basis of the critical theory, especially in the university of Deakin in Australia (see also Kincheloe 1991). There, Carr and Kemmis (1986) analysed the theory of science underlying action research on the basis of Haberman's thoughts. Their starting point is that teachers as researchers have a special character and meaning. Education does not pertain only to individuals, but is a markedly social activity. Basically, education is very problematic. We need

open and enlightened discussion on what the aims of the education are, what tools should be used in it, what kind of relations there are between different parties, etc. Action research should not be merely research of educational reality, but research that improves education. The basic idea of action research can be crystallized into two words: to improve and to involve. The essential principles concerning education are formed on the basis of ideologies and traditions. During an action research project, the practitioners try to free themselves from the factors that restrict their thinking and to become aware of the interests that are maintained by the present institutional education. Action research is guided by an emancipatory interest of knowledge, in other words, an aspiration to reach the most just possible life for all people. (Carr & Kemmis 1986, see also Räsänen 1993)

Most of the action researchers emphasize emancipation, i.e. the teachers' and the educators' emancipation from the authority of administration and researchers. On the other hand, the post-modern thinking doubts whether there ultimately can be true emancipation (Kemmis 1994). It is essential in action research to strengthen the educators' own "voice" so that it can be heard more clearly than before. There are also demands that the action research processes should be democratic to all the participants. Thus, the voice of the children should also be heard in a process of this kind, and they should be taken seriously as co-researchers.

In the recent discussion on action research, the emphasis has been on the collaboration between the teachers and the researchers (collaborative action research). In different parts of the world, networks of researching teachers are being formed, where the practitioners reflect their own work. Cochran-Smith and Lytle (1993, 8) use the concept "teacher research" instead of action research when they talk about research done by teachers which is targeted at their own work. They claim that research done by teachers is an approach or a process of change, where individuals and groups strive together to understand and change schools, day-care centres and other educational communities. This kind of research represents a new way of knowing, which should also be taken into consideration also in teacher education. With its help, the teachers' and pupils' way of constructing knowledge together can be made visible. At the same time, teachers are developing a new way of telling and writing about their work to their colleagues and their pupils.

In Finland, action research has become common in educational research and it has been accepted by university researchers, although there may still be some critical views of the teacher's status and meaning as a researcher. However, several doctoral dissertations with action research have already been accepted. In the departments of teacher education, many future teachers participate in action research studies by developing a curriculum for some specific situation. The transition to school-based curricula has meant an increase of an inquiring and researching touch in schools and the launching of many action research studies connected to curriculum development. In the teachers' preservice and inservice education, action research has also taken a form which tries, by reflecting together, to make changes

either in the university or in the school. In a process of this kind, reflection and action are united, as are also theory and practice and research and teaching. It is possible to say that Finland is undergoing a reconstruction of the entire frame of reference in educational work, where the emphasis lies on the opinion of the human being as a person who is self-directed, aware of his own learning and also responsible for it. All the educators should get personal experiences to show that knowledge is not stable, but develops and can be formed together (Nurmi 1993). The development of education is a responsibility of us all, and the change has become part of the everyday life in different educational environments. Today, educators are looking for support for their research work from universities. The universities and the practical fields are finding each other in different joint projects, where there is an aspiration to work changes in the participants themselves and in different educational contexts. Today, there is an interest in authentic cases, whose understanding and description require collaboration between the teachers and the researchers and new skills from both of them.

Action research characteristics

Action research is advancing all around the world and it is accepted as research in many universities. In the same way, it has become a natural part of teacher education programmes, a form of inservice education and a way of implementing large, publicly funded projects (Noffke 1994). The concept of action research, however, involves many kinds of studies; some of them differ from each other only slightly, while in some others the aims and the results can be completely opposite. While discussing action research and considering the research targeted to the educators' own work, the research process itself should also be examined before we know what it is really about. On the other hand, there has been a lot of unnecessary debate within the movement about what right action research is, how it is done, who can participate and what should be the target. Zeichner (1994) warns against such unnecessary arguments, which do not promote the fundamental goal of action research, the improvement of more just and equal life.

Action research can be defined in many different ways by describing it as social action which tries to create changes and by emphasizing the essential aspects of the process, such as collaboration, reflection and participation. The most essential features of action research become clearly evident in the following definition.

> "Action research is a form of collective self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, as well as their understanding of these practices and the situations in which these practices are carried out"
>
> (Kemmis & McTaggart 1988, 5)

Educators can carry out action research on a small scale by connecting it with their own work through conversations with their colleagues. Mostly, however, there is a group of teachers and educators who share a common interest in the development of their own work. Some of the action research studies are large projects funded by schools and governments.

The starting point is always some educational ideal, a goal to which the group is committed. Action research emphasizes the ethical nature of the teacher's work. During the process, one's own educational practices are compared to the ideal; ways to develop one's own action towards the ideal are discussed and experimented with in practice.

Action research proceeds cyclically, not linearly from the ideal to action. There are four elements that merge together: action, reflection, retrospection and prospection.

1) Research and action are united in action research in such a way that the practitioner is not given merely the role of a technician or an implementor in the process of renewal.

2) The roles of the teacher and the researcher are fused together in an action research process, so that the teachers and educators are no longer mere objects of research.

3) Action research changes the production and control of the knowledge concerning education, so that the knowledge of the educational process is not produced by outside experts, but by the educators themselves through their own action.

4) Action research emphasizes the contextual and social nature of change and criticises the previous strategy that focused on the significance of individual educators.

In practice, it is not easy for the teachers to do research. They have no time to think about their work. They are not used to talking about it with their colleagues or to collect data systematically and intentionally. For some teachers, however, writing has been a way to reflect their work, and the gathering of portfolios is starting in schools. Even though action research continues its triumph on academic arenas, its meaning in practical teaching work is still modest according to many writers. Even so, the literature emphasises that a reflective practitioner proceeds in his/her educational work like a researcher and that a lot of action research and teacher research of various standards is actually taking place. Carr and Kemmis (1986) state, however, that "participatory action research is NOT the thing social practitioners, academics and workers ordinarily do when they think about their work". Also, action research does NOT mean solving problems, but rather posing problems. It is NOT research where other people are researched, but research where people approach their own work. Action research is NOT a method of implementing certain external policies or a scientific method that can be adapted to social work, a method that would only try to interpret

situations, like historical research, or to take the study subjects only as objects associated with things, like natural scientific research.

Cochran-Smith and Lytle (1993) point out that research done by teachers is a particularly valuable approach, which differs from the other research on teaching. They think that teacher research does not consist of only empirical research, but also of conceptual research done by teachers, where the educators analyse the theoretical and philosophical foundations of their work. The writers divide teacher research into four categories.

1) Journals are teachers' reports of activities in class, e.g. portfolios. They can include accounts given by the teacher and analysis, reflection and interpretation of his/her own experiences.

2) Oral inquiries are perhaps the most invisible part of teacher research. In oral inquiries, at least two teachers participate in a systematic, analytic discussion about their work, reflection where they share experiences and check their own beliefs concerning their work. The starting points may be certain cases or concepts, metaphors and images concerning the participants' own education. Like in journals, the reports are usually directed only to those who participate in the same activity.

3) Classroom studies are the best known form of teacher research, and they also resemble most closely conventional university research. In classroom studies, the teacher-researchers plan together and implement research related to learning and education, reflect on their results and produce different reports (Compare Hopkins 1993). There is often a teacher network or a group working on reflective practice, where the teachers can question their own previous beliefs through critical reflection. They also try to examine the situations from different viewpoints, to find the hidden meanings in the phenomena and to understand the structural factors that have contributed to the situations (Adler 1993).

4) Essays that teachers write, mainly to their colleagues, to tell them about their experiences and the solutions they have arrived at. Essays that teachers have written about their work are quite rare, at least in Finland. Some journals, however, regularly publish short reports by teachers, and in this conference many teachers present such studies of their own work. Essays are often very personal, retrospective descriptions of the teacher's own work. In them, research means that experiences are selected, analysed and interpreted. The problem is that they are not very often added to the research done by other teachers, but nevertheless, they are valuable to the writer and to other educators, when they describe and try to conceptualize the everyday work of an individual teacher. Their meaning for university research is not so significant, however.

The principles of practical action research can be crystallized on the basis of an interesting collection by Altrichter (1993, see also McTaggart 1993b):

1. Action research is characterized by a confrontation of data from different perspectives
   - Collect also views other than your own.
   - Confront different perspectives on the same situation and use "discrepancies" as a starting point for the development of your practical theory.
   - Develop your research into a collaborative project

2. Action research is characterized by closely and iteratively linked reflection and action
   - Closely link action and reflection
   - Emphasize "iterativity" of research

3. Action research incorporates reflection and development of educational values
   - Never separate the question "How can I promote learning" from the question "What kind of learning am I promoting thereby?"

4. Action research is characterized by holistic, inclusive reflection
   - Instead of evaluating whether the given targets were achieved, try to find out what side effects were created and how you feel about the achieved results

5. Action research implies research and development of one's own self-concept and competence. During the process, the educator may feel anxious and insecure. That is why we need
   - Peer collaboration and consultation by "critical friends".
   - "Control of research" by the person directly affected by the situation under research.
   - Start small and develop your research gradually. To start small, to think big.

6. Action research is characterized by the introduction of individual findings into a critical professional discussion.
   - Participation in a professional discussion is a means of validating and developing the insights of individuals
   - The sharing of individual insights makes them accessible to the other professionals and broadens the knowledge base of the profession
   - Finally, the publication of accounts of reflective practice also means that the educational professionals get more say in the discussion about the future development of the educational system
   - It also means that the educational professionals are responsive to the public.

Significance of action research

The research done by teachers is a learning process for all the participants, which means a change in individual human beings and, above all, a cultural change in the whole researching community. To conclude my presentation, I will discuss briefly the meaning of action research for

1. professional development

2. as a strategy of change in school and in other educational institutions

3. as a production of new knowledge concerning education and learning

In many studies, the research done by teachers is considered to promote the teachers' professional development. In our own study (Lauriala & Syrjälä 1995), we examined the experiences of student teachers and experienced teachers had of the research they did, connecting it with alternative forms of pedagogy. In the project, some of the participants experimented with the principles of Open Education in the development of their own work. This was done according to action research principles. The project's goal was

* to advance the participants' collaborative skills
* to connect practical experiments with theoretical studies
* to widen and modify the participants' perspectives of school, learning, children and research, which serve as the basis of any critical assessment and renewal of their own work.

The participants experienced the project as significant for their own professional development. They appreciated especially the meaning of collaboration and reflection that was carried out jointly. The project increased the participants' belief in the teacher's possibilities to improve his/her own work. For novice teachers, the project meant an increase of self-confidence and support in finding their own identity as teachers. The research was considered to be demanding, but valuable and inspiring, and afterwards it was thought to be especially important for everyday teaching work.

Holly (1993), who has studied the meaning of teacher research for the professional development of teachers, emphasizes that teachers need support in doing research. At its best, research should support the teachers' and educators' professional development in three areas: ego maturity, moral/ethical growth and conceptual growth.

Action research is considered to be a significant strategy for change when there are aspirations to improve education and teaching in different communities. Grundy (1994) claims that the quality of education and learning does not become better because individual teachers and educators develop, but because the whole community, e.g. school or day-care centre, undergoes a process of change. Action research includes principles which should develop into natural approaches in the schools and educational environments striving at change. A change requires that the culture of the whole community changes, which can be achieved with the help of collective

reflection connected to the process. While reflecting together, the participants try to understand and change three different aspects of the culture: language, interaction in the activity and the social relationships that define the activity (McTaggart 1991b).

An action research process is also meaningful when it produces new, shared information for the participants and other teachers. At the same time, it helps the participants to understand how information can be constructed together. For example, the composition of a school-based curriculum could proceed as a construction process for the researching community's own knowledge. However, teacher research can be significant in a broader sense than just for other teachers. It can change the educational knowledge basis created by the university, while it describes the everyday life of education in a manner that is not otherwise possible. Teachers may also ask questions that others never even come to think of. (Lytle & Cochran-Smith 1993)

Action research has also been strongly criticised, and Hodkinson's (1957) classical article already contains the most important claims that have also been presented later. Research does not belong to amateurs and teachers have no time or energy for it. The teachers' process of resolving problems together will not succeed in a school, unless there is a co-ordinator and a leader. Action research is not even scientific, because its results cannot be generalized, its methodology is defective and its connection to theory remains weak. The defenders, on the other hand, claim that holistic understanding is more important than statistical generalization, and that generalization is not only the researcher's problem, but also the reader's. While reading research, the reader must ask what it can contribute to his/her own situation and what it cannot. During the past years, the methodology of action research has developed notably, as has also other qualitative research, and its meaning as a producer of new theory has become clear-cut and important. The teacher-researchers are finding each other and the contacts with university researchers have been consolidated in different parts of the world. We need each other and we need different approaches in order to develop more just and equal education in the world.

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